



WITH WHICH IS INCORPORATED THE "LANTERN WORLD."

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NOTICES.

THE *Optical Magic Lantern Journal and Photographic Enlarger* is issued on the 1st of every month, price Two Pence, and may be obtained from all Newsvendors, Railway News Stalls, Photographic Dealers, or from the Publishers, at the following rates, post free:—

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NOTES.

Notice.—The directors of the Magic Lantern Journal Company, Limited, wish us to announce that the October number of this Journal will be a special one, and that it is the intention of the management to circulate that number freely both at home and abroad, by which means it is expected to enlist a huge number of extra regular subscribers. If readers in the British Isles will send us the names of their friends abroad who take an interest in lantern matters, a copy will be sent to them. Personally, we would ask dealers and manufacturers of apparatus to let us have particulars of such novelties as they intend introducing this season, as soon as possible, so that such may be included.

"Living Pictures."—The above is the name of a particularly interesting book issued by the *Optician* of 123-5, Fleet Street, E.C., price 2s. 6d. Here is traced the history of what is now called living pictures, commencing with persistence of vision through its various stages in days gone by right up to and including the very latest patterns of apparatus in connection with this fascinating subject. The book, which

consists of about 270 pages, contains illustrations on almost every page, and can be read and re-read with interest. The author, Mr. Henry V. Hopwood, has been most painstaking both in his selections and writing, and has described this subject in a manner which will be of interest to non-practical as well as practical readers.

Newton & Co.'s New Scientific Instrument Factory.—Owing to greatly increased business, Messrs. Newton and Co., of Fleet Street, E.C., have found it necessary to open a new factory at 1, Little James Street, W.C., where in future the well-known "Apps-Newton" induction coil, multiple-plate Wimhurst electrical machines for X-ray work, and instruments for wireless telegraphy will be made. This will relieve the strain on their Fleet Street factory, which will be devoted entirely to the manufacture of the projection and other forms of science lanterns for which this firm is noted. Lantern slides will, as hitherto, be made and finished at their Dalston and Islington factories.

Taylor, Taylor & Hobson's New Factory.—Some months ago we commented upon the new premises which were being erected by this firm. These are now completed and in working order. All letters should now be sent to their new address at Stoughton Street Works, Leicester.

Death of Mr. Alfred Meager of Anerley.—We regret to have to announce the death of Mr. Alfred Meager, who has, in the form of instructive articles in our columns, often afforded information to our readers. During a lantern engagement at Luton last winter he contracted a chill and pneumonia followed; however the symptoms of this abated, but he was left so weak that he was quite unable to rally. After his death, which occurred a few weeks ago, it was ascertained that the lungs had been invaded by cancer. He was 41 years of age, and had perhaps the most complete lantern outfit ever made, which included many special pieces of apparatus, so as to enable him to undertake the projection of any class of lantern work of high character. He made a special feature in undertaking projection work for high-class scientific lecturers. Mr. W. H. Shrubsole, F.G.S., F.R.M.S., in a letter to us says: "I always knew that the illustrations of my lectures would be shown in the best possible way whenever Mr. Meager was at the lantern. In him I have lost a friend and a valuable helper."

H. Snowden Ward.—Mr. H. Snowden Ward is not only the editor of the *Photogram* (6, Farringdon Avenue, London), but he is an all-round photographic society man. President of some, secretary of others, and a member of council of several, he discharges his duties well, and yet seemingly has time to spare, for he has lately undertaken the correspondence in connection with the American Institute Photographic Salon, which is to be held from November 27th to December 18th at the Gallery of the Institute, 19w, 44th Street, New York, U.S.A. Mr. Ward has been selected as one of the judges at the Exhibition of Horticultural Photographs in connection with the "One and All" Flower Show to be held at the Crystal Palace from August 14th to 19th. In addition to this, he is at work on an *Index to Standard Photograms*, which is practically to be a catalogue of prints offered for publication purposes or sale. Persons having such work for sale should communicate with Mr. Ward, so as to get their items included in his new book. Added to all this, Mr. Ward (or perhaps it is his brother, who is also an industrious Yorkshire man) is connected with the new American photographic magazine, the *Photo Miniature* (Tennant and Ward, 289, 4th Avenue, New York).

Axe Brand P.O.P.—Messrs. Fuerst Bros.



are supplying an excellent make of printing-out paper under two grades, viz., brilliant for soft negatives, and soft for hard negatives, with either glossy or matt surface. Although any of the recognised formulæ will do for toning, Messrs. Fuerst specially recommend the following:—For purple tones: 50 grains sulpho-cyanide ammonium, 30 grains chloride of aluminium, 4 grains sulphite soda, 20 ounces water; when dissolved add 3 grains chloride of gold. For brown tones: 50 grains sulpho-cyanide, 50 grains washing soda, 20 ounces water; when dissolved add 3 grains chloride of gold. These baths can be used as soon as made, but better results will be obtained if made up the day before using.

Scottish Kinematographic Co. and Walker & Co.—Relative to the announcement made in our notes in last issue, Messrs. Walker and Co., of Aberdeen, write us (see letter on another page) that they are not the particular "Walker" connected with this company.

Starting a Lime Cylinder Factory.



CORRESPONDENT asks us the following question, which was intended for our Notes and Queries column; but the question being one of interest, we prefer replying to it at such length as would preclude its insertion in the column usually devoted to Answers:—

He writes: "I understand that a good living is to be made by the manufacture of lime cylinders for the use of lanternists and theatrical limelight users. I am at present out of employment, but have some funds, and would like to engage in such manufactory. Will you kindly give me some idea as to the general apparatus required, keeping the idea of economy in the foreground?"

The business of making lime cylinders is somewhat cut up at present, there being several firms now engaged in their manufacture; but still the army of lanternists is rapidly growing, and it is to be hoped that there will be room for all.

One good thing, especially for the manufacturer, is that limes are not everlasting. A good lantern will probably last a lifetime, whereas the limes have a very fleeting existence, several being used practically every time a triple is exhibited. It is therefore to be hoped that the business will be a profitable one, although good canvassers and taking advertisements, combined with a good quality of lime, are absolutely essential to success.

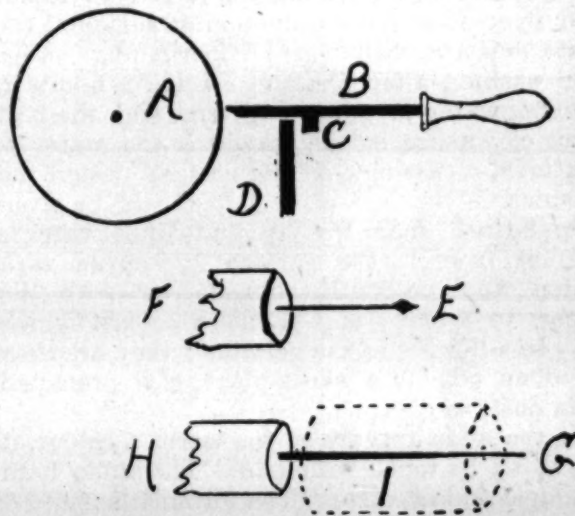
The lime can be obtained of excellent quality in various parts of England and Ireland, and we think you should be able to obtain plenty of good quality even in your own county at some of the burners.

Having ascertained the source of a good supply of material of both soft and hard variety, the next thing is to see about cutting up, turning, etc. It will be requisite to saw up the lumps of lime into pieces a little larger than the desired cylinder is to be. This sawing up is hard work and very destructive to the saws, which in consequence require frequent sharpening. Sawing can be done either with the hand saw or by means of several small circular saws running parallel at the required distance apart, but as economy seems an item, hand saws will do at least to commence with.

At least one turning lathe will be necessary, and this need not by any means be a high-class machine. It will be requisite to fit two chucks, one to hold a spear-pointed drill as shown

at F E (a fluted drill is, however, vastly superior although more expensive), and the other to hold a rat-tail file as at H G.

The lime having been rough sawn, it is well to chip off the corners with a chisel, after which this roughly shaped cylinder can be applied to the lathe fitted with the drill F E, by which a hole can be quickly drilled through its length. Several rough cylinders having undergone this process, the chuck fitted with the taper rat-tail file is screwed on the lathe, and a lime slipped on until secure as at I. A chisel is then held to the rotating cylinder, and it can be quickly turned into shape. A simple method of ensuring that each lime will be of exactly the same diameter is to fasten on the chisel a stop as shown at C, this will allow it to go only as far as the rest D will allow. Wear and tear of sharpening can of course be allowed for by



the adjustment of the rest D. Care must be taken that the limes are kept away from damp.

The foregoing is perhaps the cheapest method of fitting up a factory. Had the cost not been an object we might have suggested apparatus of a superior kind, whereby many of the operations would have been automatic. Barrels for the rough lime will have to be obtained, and also benches, shelves, etc., will have to be put up, and a supply of jump-lid tins procured, but the total expended on apparatus, etc., need not exceed a ten pound note, although the fitting up of a high-class factory with labour saving devices would cost a higher figure. Money should of course be kept in hand for rent, wages, commissions, advertising, etc., and the rest depends on the quality of the lime and cylinders, and the business push of the manufacturer, and even then, we may add, it may take a long time to establish a paying connection.

Lantern Slides and Slide Making.

Continued from page 89.

FOR thorough fixation the slide should be left in the solution two or three times as long as it took to clear, and is then examined for density, colour, etc. If it is not all that it should be, or, at any rate, only very slightly faulty, the very best remedy is to make another; but if the colour is satisfactory, and the fault only a little too much density, it may be reduced. A good reducer is Howard Farmer's, consisting of 10 per cent. solution of hyposulphite of soda with sufficient 10 per cent. solution of potassium ferricyanide added to turn it a pale yellow. The action must be watched carefully as, if too much of the ferricyanide has been added, it is very rapid, and immediately the reduction is sufficient the plate must be well washed in running water. For washing after fixation I think 2 hours in running water is quite sufficient, and the best form of washer is one in which the water is continually passing over the plates. When the washing is finished, each slide should be given a final rinse under the tap, and, while water is running over it, the surface is mopped with cotton wool or gently rubbed over with the fingers to remove any particles or grit which may be adhering to the gelatine; they are then stood on edge in a warm place, well protected from dust, to dry.

If the slide appears of too warm a colour, it can easily be toned with gold. The alpha bath is simple and effective. The formula is:—

Hypsulphite of soda	..	..	..	2½ ozs.
Acetate of soda	..	..	..	½ oz.
Ammonium sulphocyanide	..	..	..	¼ oz.
Gold chloride	..	..	..	4 grs.
Water	..	..	..	10 ozs.

The salts are dissolved in the water in the order given, and the bath will keep for a considerable time in the dark. In toning from brown-red to brown, the slide must be removed and washed as soon as a slight perceptible toning action has taken place, as the colour is much colder when dry; for a black the toning must be topped while the slide is still brown-black; for as bright blue it may continue until a decided blue colour is obtained, which will be more intense after drying. With this bath slides may be fixed and toned at the same time, or may have been fixed and dried previously. The sulphocyanide bath may also be used, but much stronger than for P.O.P. The formula is:—

Water	..	..	..	1 oz.
Ammonium sulphocyanide	..	..	..	20 grs.

When dissolved, add slowly 1 grain chloride of gold in 1 ounce water.

Before toning with this bath the plate must be well washed to remove the fixing solution.

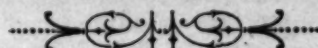
To tone slides from black to brown, uranium nitrate is used. The formula is:—

Uranium nitrate	..	..	..	1 gr.
Potassium ferricyanide	..	..	..	1 gr.
Glacial acetic acid	..	..	..	15 mms.
Water	..	..	..	1 oz.

With this solution a black coloured slide can be toned to various shades of brown and finally to red; the toning should be carried slightly further than the colour required, as there is some reduction of colour in the final washing, which should not be continued longer than is necessary to remove the yellow stain from the clear portions. The slide should be rather lightly developed, as uranium toning has also an intensifying effect. These colours can be changed to green or blue by immersing the toned and washed slide in a weak iron solution, *i.e.*,

Strong solution perchloride of iron	..	..	..	2 mms.
Hydrochloric acid	..	..	..	4 mms.
Water	..	..	..	10 drs.

As soon as the shade of green or blue wanted is reached, the slide is at once washed for 5 or 10 minutes and dried. On removing uranium-toned slides from the washing water they should be gently dabbed over with a pad of soft cambric, free from dust, to absorb as much of the moisture as possible, otherwise the colour will run and spoil the outlines. They are then dried, and, I think, will be found quite permanent.



Optical and Mechanical Effects for the Lantern. — No. X.

By EDMUND H. WILKIE.

(LATE ROYAL POLYTECHNIC INSTITUTION).

IN producing pictures and effects illustrating the setting of the sun or the rising of the moon, the artist on glass has an easy task compared with his brother of the brush, whose work is upon opaque material, for he can by obscuring his picture to the desired extent, render his high lights as powerful and vivid as he pleases. Therefore, slides of this character have always been favourites with designers of effects, and I think it is not going too far to say that more moonrise effects have been painted than all the other subjects put together.

Years back it was the custom to make the effect slide containing the moon and its reflections on a lever frame, and by raising the handle to disclose the lights by drawing away the blacked out portions of the glass, and this simple motion was found to be sufficient when only the moon and, say, a reflection in the water was needed. But sometimes it was necessary, in order to more perfectly realise the effect, or on account of the position of the prominent objects in the picture, that a small portion of the view upon which the moonlight fell should also be painted on the effect slide in a very light colour, to give the object the appearance of being illuminated by the moon's rays when thrown upon the main view.

In this case a frame such as we show at Fig. XXIX. is found useful, and it will be seen that when the lever is in the position shown in the diagram the moon and its reflections would be disclosed, but on lowering the handle the small portions of opaque black shown by the dotted lines would descend and cover them, thus cutting the effect off from the screen.

If it is desired to cause the moon to actually rise two moving glasses are necessary, one having the moon drawn upon it surrounded by opaque black, and the other, which would be a slip, would disclose the illuminated buildings.

In Fig. XXIX. we show one method of causing the moon to rise, and this is in general

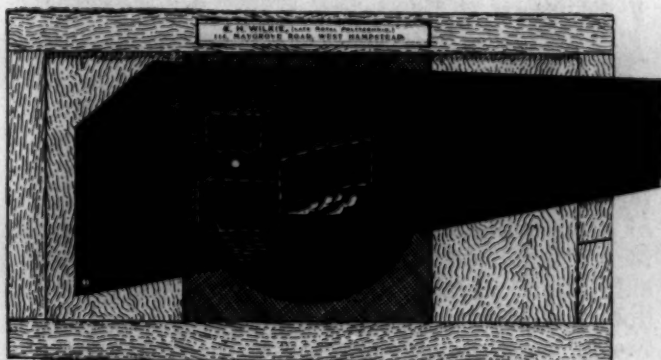


Fig. XXIX.

use, as it is easy to make and the frame is inexpensive; but where excellence of effect is desired, and the small additional expense is not considered an obstacle, a very slow moving rackwork motion offers special advantages.

Such a frame we illustrate in Fig. XXX., where we see that it consists of a wooden block 7 inches by 4½ inches, with the usual 3 inch glass upon which the view or effect is to be painted set in the centre. Against this set glass

rests a larger disc of glass 4 inches in diameter, which has a brass rim with teeth such as we find in the ordinary rackwork slides; but in this case the teeth of the rack are cut at an angle, and the pinion has an endless worm cut on its diameter. This arrangement moves at a very slow rate of speed compared with the ordinary racks, and enables the operator to raise the moon or sink the sun almost imperceptibly.

It will be noticed that the large rack glass is not placed in the centre of the frame as the set glass is, but rather on one side, so that the side of the large glass and that of the small one come close together on the left, but are wide apart on the right.

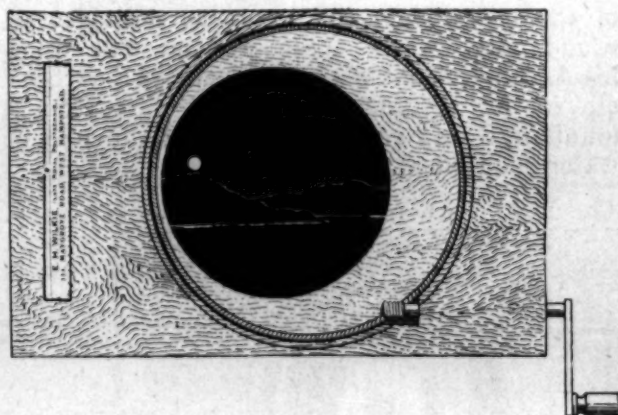


Fig. XXX.

This is done to give the moon, which would be on the left side, a more perpendicular path in rising than would be the case were the two circles superimposed.

By arranging the details of our picture in a suitable manner, we may get more than the one effect upon a rack frame. There is a very well-worn subject, which I believe was first copied from Telbin and Grieves' panorama of the "Overland Route to India," representing the arrival of the mail boat at Alexandria, and here we see a dark night scene without a moon, showing only the vessel at anchor and the lights of the town in the distance. The effect to this view is laid out as we see in Fig. XXXI., where we see the moon, which can be brought on at any time by means of a slip on the other side of the frame, also a ripple, and the steam from the funnel of the steamer.

The steam is painted in a small circle in the centre so that it can be revolved without interfering in any way with the moon, and beyond the clear space left for the moon comes the waved marking for causing the ripple on the waves as the glass revolves. The moon

itself, and its light upon the sea, are both hidden by a blacked slip glass, and the picture appears on the screen with the steam issuing from the funnel only, the other portions of the effect being brought on afterwards.

The rack frame is used for a large number of effects, and the double rack or chromatrope is capable of producing some very perfect illusions, the most effective of which are the display of fireworks, and the play of water from fountains, etc. In both cases the markings of the moving glasses are the same, consisting of a series of curved lines extending from the centre of the glass to the outer edge, and when these glasses are revolved in contrary directions, so that the convex sides of these lines oppose each other, a motion is obtained which has the appearance of advancing from the centre to the sides all round, and when these are covered by a blacked out fixed glass upon which has been etched, for instance, the jets of water from a fountain, a very good realisation of the play of water is obtained.

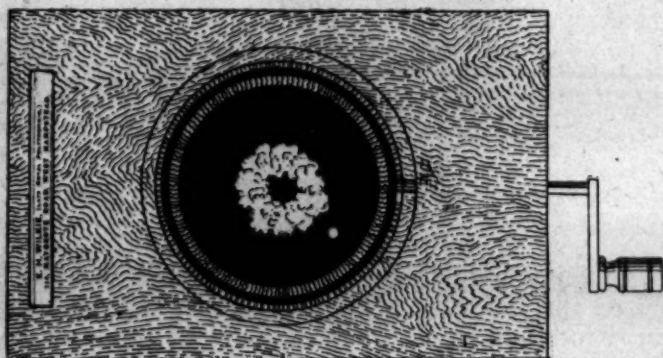


Fig XXXI.

Sometimes when a large waterfall occurs in the centre of the picture, it is better to make the frame with a very full sized rack, as in Fig. XXX., but, of course, with a very much faster movement.

By the aid of these movements many fine effects may be arranged at a really moderate cost by using, say, three suitable photographs all correctly in register and painting them first sunset, second dark night without a moon, and the third blacked out all over with the exception of those portions upon which the moon's rays would fall. These being slightly tinted with a neutral blue are thrown on to the night view as an effect.

The writer on one occasion obtained some very fine photographs of the Horticultural Gardens, 'South Kensington, taken from a

special point of view, and showing the large fountain in the foreground, and the great conservatory backed by the Albert Hall in the distance. These were prepared in the following manner:—

The first view was made to represent twilight, with the gorgeous tints of the setting sun still remaining low down in the sky. The second photo was covered to represent night. A third photo was blacked out leaving only the conservatory, which was then very brightly coloured in a manner to give the idea that it was brilliantly illuminated in the interior. A fourth photo was blacked out and carefully etched into an effect showing the outline of the flower beds, trees, and conservatory in glow lamps of various colours, and an effect was arranged on a double rack slide by means of which the fountain was made to play, its many jets sprouting water in various directions, and completing a really beautiful picture.

This will serve to indicate what may be done with a suitable natural photograph.



A Plea for more "Charm" in Lantern Work.

By HOWARD STUBBS.



WHILE fully cognisant that of late years the lantern and all apparatus pertaining thereto have advanced by rapid leaps and bounds, yet at the risk of being dubbed old fashioned I venture to assert that there was a charm about our old world displays that one looks for to-day, alas in vain. This, in the opinion of the writer, is mainly attributable to the fact that too often nowadays a lantern exhibition merely consists of a series of indifferent photographic slides (usually hired for the occasion) being projected to the accompaniment of the prosaic discourse of an amateurish and inexperienced lecturer (?).

Let it not be thought that I seek to depreciate good photographic transparencies—such pictures when of the best are as fine as anything that can be shown in the lantern. What is to be deplored is that exhibitors are content to inflict on their audiences too much plain, hard fact, and evince a total disregard to anything which is likely to charm and amuse. Now, personally, I have a decided preference for a lantern picture that has been artistically worked up in colour, and it is to the colouring

of lantern slides I would first direct the attention of the enthusiastic worker.

Commencing lantern work some years ago, my chief aim was the production of a really good coloured slide. Without wishing to egotize I may say I am a fairly expert photographer, and this, coupled with the fact that I possess a pretty good knowledge of using the brush, enabled me to accomplish the end I had in view. Albeit, not without considerable practice, and not a small percentage of failures, for perhaps in no branch of lanternism are the hopes of the novice more frequently shattered. I speak feelingly when I say that oftentimes a slide on which considerable pains have been bestowed, becomes an enormity when submitted to the lantern for projection.

Yet I would urge those who make their own transparencies to endeavour to surmount the difficulties of slide painting. To an enthusiastic worker, having an average share of artistic ability, there is perhaps no more pleasing and profitable pursuit when once the initial troubles have been overcome. Practice will do a great deal as will also the perusal of a good standard work on the subject.

As an example of what the student would do well to avoid, it will not be out of place here if reference is made to the incredible amount of harm done by much of the ordinary "commercial" rubbish in the way of coloured slides which flood the market. I recently saw a set of these which was about as villainous as anything I have ever had the misfortune to look upon. In nearly all, the

delicate details

of the pictures were ruthlessly obliterated by heavy layers of crude pigment, and rendered all the more hideous by the excessive use of such primary colours as lake and Prussian blue.

It would be impossible to speak too strongly on the amount of mischief created by trash of this kind. The dealers who stock such atrocities are not wholly to blame, for living as we do in an age of cheapness, to an extent they merely cater for a demand.

It is to be feared that the tendency to judge a transparency by the amount of pigment stuck on is by no means decreasing, and if proof of this is wanting, a glance into some of our opticians' windows will convince anyone who may think I have been tempted to exaggerate the evil.

To many who will strive to excel in the ensuing season, let me urge the desirability of infusing a little more charm into their work.

Show some artistically coloured slides, and above all, do not be above the judicious introduction of a few choice effects at the close of an exhibition.

Lanternists generally are indebted to Mr. Wilkie for the series of admirable articles on mechanical effects that of late have been appearing in the pages of the OPTICAL MAGIC LANTERN JOURNAL. Few specialists, if any, have had more experience in designing pictures of this class than Mr. Wilkie, whose long association with the Royal Polytechnic Institution is too well known to need more than passing reference here.

It is worthy of note, too, that although a large number of effects necessitate the use of a bi-unial or triple, yet there are many subjects that may be effectively exhibited in a single lantern. I have before me as I write a remarkable mechanical slide, which, for effect, is probably as fine as anything that can be projected on the screen. In this ingenious device, which was described in the pages of the OPTICAL MAGIC LANTERN JOURNAL recently, a large steamer is seen leaving Dover, and a beautiful panoramic effect is produced of the passage across the Channel, whilst the heaving of the boat, and the

rolling motion

of the waves are imitated with such wonderful closeness to nature as to be little short of a revelation to many who are prone to associate one-lantern effects with the "comic slips" supplied by the trade.

Be it observed that no allusion has been made to the immense value of the lantern from an educational standpoint. No. Abler pens than mine have done this again and again. My purpose here is to deplore the utter lack of charm and attractiveness in so many of our present day exhibitions, and to emphasise my point more strongly I do not think I can do better than relate the following:—

Some time ago, in Birmingham, a worthy local optician, whose capabilities as a public speaker are known far and wide, gave an enjoyable lecture on the Solar system. His remarks were made doubly interesting by the projection of a number of beautifully painted astronomical slides, which, judging by the frequent applause bestowed on them, went far towards making the lecture the emphatic success it undoubtedly was.

In striking contradistinction to this let me add that I have since listened to a speaker whose discourse on the constellations was illustrated by a collection of "slides," con-

sisting, I believe, of pieces of millboard, into which a series of holes had been punched, intended, it is presumed, to represent planets. Now, I am quite willing to give this gentleman credit for a certain amount of commendable ingenuity displayed in his method; yet such a procedure was scarcely calculated to improve the mind or temper of a public audience, and it must be chronicled here that in this case the lecture was, as it deserved to be, a decided failure.



On Book Illustration by Photography.

By T. PERKINS.

THERE is one form of lantern entertainment which, though it is seldom, if ever, tried by the amateur photographer, could not fail to give pleasure to many of his friends in the winter months, and the preparation of which would lend an added charm to a summer holiday. I mean the illustration of some well-known poem or novel by means of photography, and the printing from the negative so obtained a series of lantern slides. These could be shown to the photographer's friends, or in some public hall, while the lecturer gave a brief outline of the story illustrated, reading here and there some telling passage *in extenso*.

I do not mean so much the producing of pictures similar to those lent by various firms of lantern lecture providers under the name of "life model" sets, because it is rarely possible to find a model suitable to illustrate even one character in a book, still less is it probable that one photographer will be able to find a number of models sufficient to fully

illustrate any tale.

Moreover, there are great difficulties in getting models to adopt suitable poses and expressions. Most frequently the photographer who aims at doing this only succeeds in getting representations of a kind of tableau vivant type, not of the genuine article. But what I suggest is that the scenes where the different incidents of a story occur should be photographically reproduced, and thrown upon the screen. A book to lend itself to this method of illustration must be one that has strong local colour—one whose author places his characters

in real localities, and does not invent imaginary landscapes to serve as their surroundings.

I, personally, am a great admirer of the Wessex novels of Mr. Thomas Hardy, and it has long been a work of great interest to me to identify the various places he describes, to which he often gives names of his own coining, to which he adheres consistently throughout the various stories. This I was able to do in most instances, so accurate are his descriptions, and so careful is he in pointing out the distances between the various places and the position in which they lie with regard to one another, even before the uniform edition of his works published by Harper appeared, in each volume of which he gives a map drawn by himself representing the Wessex of his stories. In some few cases I failed to identify or wrongly identified certain

towns or villages,

discovering my mistake only when I saw the map. In only a very few cases has the map been insufficient to set me right; in these the author has personally given me the information desired.

One of his books, "Tess of the D'Urbervilles," I have copiously illustrated. Living as I do only 16 miles from Casterbridge (Dorchester), 10 from Kingsbere (Bere Regis), 12 from Shaston (Shaftesbury), 10 from Marlott (Marnhull), 8 from Stourcastle (Sturminster Newton), 16 from Wellbridge (Wool), I am in the very centre of that part of Wessex where the charming, lovable, ill-used heroine lived; and partly by rail, partly by driving, partly on my tricycle, which I have had specially fitted for carrying photographic apparatus, I have visited most of the scenes described in the book, and have succeeded in one or two instances in introducing a figure illustration. I used for my photographs a $\frac{1}{2}$ -plate camera, as that was a suitable size for prints intended to be stuck into the book. Of course it goes without saying that the prints were made on platinum paper, as the glossy abominations on P.O.P. would spoil the appearance of any book.

At first I tried mounting the prints on paper, but I found this did not answer, so I cut out a series of suitable masks from black paper, cut my platinum paper into pieces rather larger than the size of the pages of the book, and printed the photographs with a white margin, thus giving them somewhat the appearance of steel engravings. By properly trimming them, and turning up a narrow strip along the edge, I was able to insert the pictures opposite to the passages they were intended to illustrate.

So attractive is the appearance of my own copy of the novel that I have had applications from several friends to insert a set of prints in their copies, with offers of ample remuneration for doing so. In this set we have Tess in her holiday dress of white, with peeled willow wand and bunch of white flowers, setting out for the club-walking, pictures of the Pure Drop Inn and Rolliver's at Marlott, the ancestral vault in Kingsbere Church, the D'Urberville window above it, the buxom milkmaid Marion milking a Guernsey cow, the ancestral manor house at Wellbridge, where Tess confessed to her newly wedded husband the error of her early days, the stone coffin in which the husband walking in his sleep laid his wife, and lastly a view looking eastward at Stonehenge, the camera having been planted on the altar stone on which the poor weary girl was sleeping when she was surrounded by the police, who had come out to arrest her for the murder of the man who had led her astray in her early days, and to whom the

cruel conduct

of her husband and a series of untoward circumstances had forced her to return, and whom, driven to despair by the return of her husband and stung by the taunts of the other, she stabbed to death.

These are only a few of the pictures. The series might be much extended by carefully following the characters from place to place. The negatives are all available for the production of lantern slides, and I should think would much interest anyone who knows and appreciates the book. But even if others do not feel so great an interest in the final results as the photographer himself does, there is no doubt that the work of gathering these illustrations is most fascinating, and a holiday spent on such work as this is far more enjoyable than one spent, as many are spent, in objectless rushing from place to place, or getting through one day after another by indulging in the frivolous amusements where-with the dwellers in fashionable holiday resorts seek to cater for the visitor, at the same time inducing a flow of money from his pocket to their own.

Systematic photographic work is far more interesting to the photographer than desultory snapshotting without a definite object, and the man or woman who spends a holiday in securing a series of records of some special subject, whether it be the geological or architectural features of the district in which the summer holiday is spent, or, as has been suggested

above, in illustrating some work of fiction, or in obtaining views of the places where a certain series of historical events have taken place, or of spots raised to interest because some poet has lived among them and loved them and because they have coloured his verses, will look back with satisfaction to the fact that he or she has something definite to show as the result of a pleasant holiday.

To wander with a camera over the ground immortalised by Scott or Wordsworth, to follow if opportunity and time allows Shelley in his various wanderings, to gather a

good collection

of pictures illustrating the district in which Tennyson passed his youth, and which gave rise to many of his early poems, is pleasant and interesting work.

An evening spent with one of our best-known photographers, during which he showed me a series of some 50 odd slides from negatives taken in the neighbourhood of Tennyson's early home at Somerby, stands out vividly in my recollection still.

Scarcely less interesting was a set illustrating the district through which Shakespeare's Avon flows, shown to me by a Midland professional photographer, whose portraits are among the choicest gems of our great exhibitions, and who loves his art so well that for his own enjoyment he takes his camera with him whenever he can snatch a brief holiday from his business engagements, and has thus possessed himself of many splendid series of architectural, archaeological, and other subjects.

I write these few notes in the hope that they may be taken as useful hints by the readers of the OPTICAL MAGIC LANTERN JOURNAL, and add to their own enjoyment during their summer tour, and to the enjoyment of their friends also when with the shortening days of late autumn the lantern reasserts its importance.

SECCO FILMS.—A new film of this name is about to be placed on the English market by Messrs. Whitney, Graaff & Co., 39, Lombard Street, E.C. The sensitised film is in the first instance on a special paper, and after exposure and development is pressed in contact with another special paper supplied. After drying, these two papers are stripped away, leaving a strong thin film with the developed picture as it were between the two thin flexible films. The film is not of celluloid, and when held in a flame does not blaze. The price at which it will be introduced is 25 per cent. below dry plates.

Shadowgram or Silhouette Slides for the Optical Lantern.

By THEODORE BROWN.

SCHOOLMASTER CANING BOY.—No. VII.

All the slides here described are of new and original construction, working models of each having been made and tested before publication by the author. Manufacturers will therefore find them to be thoroughly practicable, and if they desire to make them for the market they are at liberty to do so, providing a sample is sent to the inventor by way of acknowledgment.



HIS slide is quite as amusing as any of the silhouette series that have been here described. It represents a schoolmaster caning one of his misbehaved pupils, but as often as the cane descends to inflict the punishment the boy draws his hand back and so escapes the stroke.

The model is fitted into the usual wooden framework, and may be made of thin brass, zinc or tin, etc.

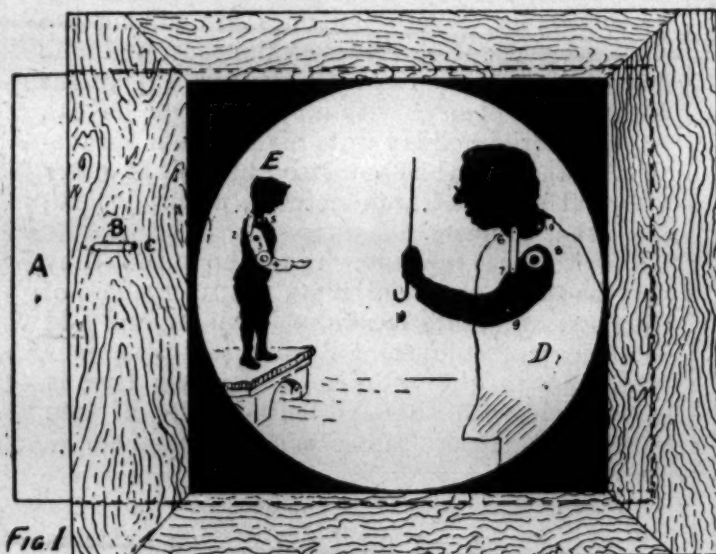


Fig. 1

There are two glasses, the one at the back being fixed and the one at the front sliding in and out.

The working parts of both the figures E and D (Fig. I.) are actuated by male and female blocks, the former being fixed to the sliding glass, and the latter to the arms of the two figures. The female blocks are shown in Fig. I. at 4 and 8. The male blocks are not represented at all in Fig. I., and only one of them, that actuating the schoolmaster, is shown in Fig. II.

Fig. II. shows the working parts of the schoolmaster only. The boy is worked in a similar manner, so that one diagram is quite sufficient to illustrate the action of both figures.

The sliding glass A, in Fig. I., is shown in the position it occupies when it has been pushed in. When it is pulled out the pin c, which is fixed to a block stuck on to the outer surface of the movable glass A, slides along the slot B that is made in the framework. It may be mentioned here that the pin c is fastened to the block after the glass has been slipped in.

Fig. III., which is an enlarged sectional diagram, is given in order to illustrate clearly this new method of actuating figures by means of male and female blocks, so that none of the connections are visible.

The male block M is furnished with a headless screw which works in a small hole in the female block F.

I will now proceed to describe the actions of

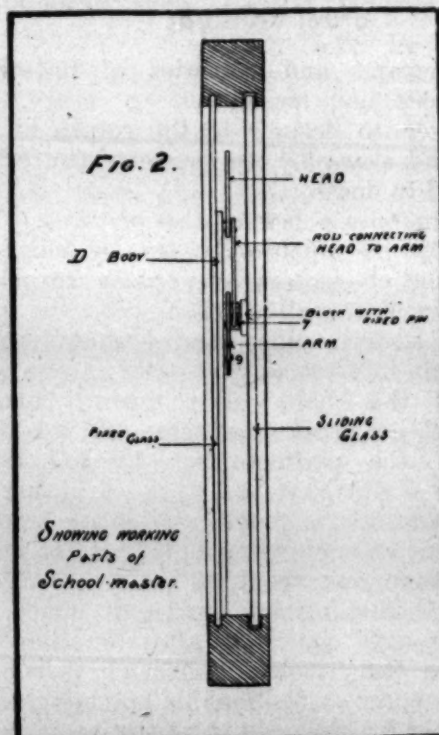


Fig. 3.

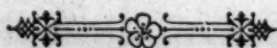
the figures, and for this purpose I must ask the reader to direct his attention to Fig. I.

When the glass A is pulled out, the pins fixed to the male blocks work in 8 and 4. The arms of the figures are pivoted to the bodies, which are glued to the fixed glass at 9 and 3, and thus a downward movement is given to the schoolmaster's arm and a backward movement to the boy's. At the same time the heads,

which are pivoted to the body at 10 and 5, being connected by small rods to the arms, are thrown forward. Any difficulty that may be experienced by the reader in understanding the different actions will be cleared up by a reference to the sectional diagram marked Fig. II. This diagram, as before mentioned, shows only the working parts of the schoolmaster.

The body *b* is shown glued to the fixed glass. The head is pivoted to the body, and the manner in which the connecting rod (marked in Fig. I. at 6 and 7) is fastened to the head and arm is clearly illustrated. It must be borne in mind that the block shown in Fig. II. is only one of the two male blocks used—the other actuates the boy's arm and head, and consequently is not shown. The only real difficulty that is likely to be experienced in understanding thoroughly every movement of the figures is contained in the question "How is the boy's head thrown forward when his arm is drawn back?" This difficulty will be cleared up when it is understood that the top of the arm, or the shoulder, is slightly raised when the other part of the arm is drawn back, and thus the small rod connecting the head and arm at 1 and 2, Fig. I., is raised also, causing the head, pivoted at 5, to be thrown forward. To complete this mechanical slide a mask is fastened to the fixed glass.

It is obvious that the effect may be varied by the operator according to the rapidity and distance that the sliding glass is moved.



A New Form of Stereopticon.

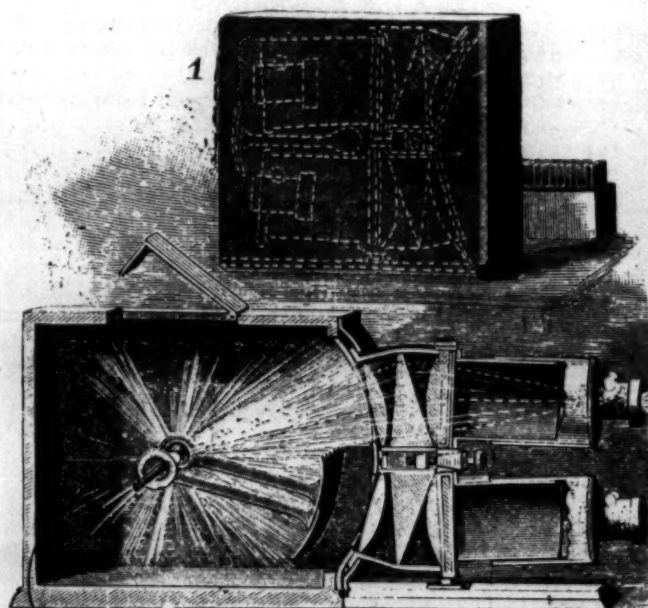
A MULTIPLE dissolving view lantern has been invented by Dr. Samuel E. Woody, 600, West Broadway, Louisville, Kentucky, which includes various improvements in construction, by which the light is so refracted that the picture from each of the two optical systems appears on the same spot of the screen.

Referring to Fig. II. of the engraving, which is from the *Scientific American*, it will be observed that the two condensers are mounted at the end of the light casing, the upper being fitted to slide in a segmental guideway on the light casing so that it can be adjusted relatively to the lower by means of a wedge interposed between the frames of the condensers. By

reason of this adjustment a proper registration of the two pictures projected by the two optical systems is obtained.

Each condenser is provided with two plano-convex lenses, having a prism interposed between them, so that the rays of light passing to the first lens are refracted by the prism to the other lens adjacent to the slide-holder. The two lenses of each condenser are inclined to each other, and the interposed prism refracts the rays of light at a proper angle.

The apparatus is provided with a shutter, held movably in the light casing between the light and the condensers. By operating the shutter the rays can be made to pass through one or the other of the condensers.



In the modified form, shown in Fig. I., the light casing, in addition to the ordinary function, serves as a receptacle for the condensers, the slide holders, and the adjustable tubes carrying the objectives, thus facilitating the transportation of the apparatus. In order to obtain this compact arrangement, the bottom of the light casing is formed with a dovetail groove adapted to register with a similar groove in an extension hinged to the outer end of the bottom, and forming a cover for the open end of the casing when the several parts are stored. In the registering dovetail grooves a support slides which carries the stereopticon parts. In using the device the extension is swung down and the support carrying the stereopticon is slid out, reversed, and reinstated in its proper operative position.

Correspondence.

NOTTINGHAM INCANDESCENT LIME CYLINDER SYNDICATE.

To Mr. J. Hay Taylor, Editor.

July 10th, 1899.

DEAR SIR,—Will you please insert in your next issue that I have resigned my position as director of the Nottingham Incandescent Lime Cylinder Syndicate, of Egerton Street, Nottingham, and 385, Old Kent Road, London, and that as and from this date I have no further connection whatever with the said business.

Your kind attention will oblige.

Yours faithfully,

JOSEPH J. SMITH.

122, High Street, Peckham, London, S.E.

To Mr. J. Hay Taylor, Editor.

July 14th, 1899.

DEAR SIR,—I hereby give notice, to all whom it may concern, that I have resigned my position as one of the directors of the Nottingham Incandescent Lime Cylinder Syndicate, Limited, and from this date cease to act in any capacity connected therewith.

Yours faithfully,

C. W. LOCKE.

244, Tottenham Court Road, London, W.

To Mr. J. Hay Taylor, Editor.

July 17th, 1899.

DEAR SIR,—Will you kindly notify in your columns that I have withdrawn my support as director of the Nottingham Incandescent Lime Cylinder Company, Limited.

And oblige, yours faithfully,

F. BROWN.

18, Gate Street, London, W.C.

To Mr. J. Hay Taylor, Editor.

July 12th, 1899.

DEAR SIR,—May I be allowed to request the favour of an insertion in your next issue to the effect that I have ceased to have any connection with the Nottingham Incandescent Lime Cylinder Syndicate, Limited, both as regards membership and as representative and agent of the said syndicate.

Your kind attention will oblige,

Yours faithfully,

WILLIAM H. ASSENDER.

3, Vestris Road, Forest Hill, S.E.

WALKER & COMPANY'S CINEMATOGRAPH.

To Mr. J. Hay Taylor, Editor.

DEAR SIR,—As considerable confusion has been caused in the cinematograph world through the similarity of adopted designations, we feel constrained to inform you that we are in no ways connected with the Scottish Kinematograph Company, neither have we gone to the United States, America.

We are the only Walker & Company who have ever appeared in the Aberdeen Directory in connection with the cinematograph.

As our exhibitions are quite distinctive from any other, you will, we are confident, accede to us the privilege to jealously guard our good name.

Yours respectfully,

WALKER & COMPANY.

19, Bridge Street, Aberdeen.

Notes and Queries.

D. Ogston.—Scott's warm air saturator has long since been superseded by other makes, and we cannot tell you where you can get such unless you advertise for a second-hand one.

Walter.—The particular slides which have been described in past issues can be obtained at a moderate price from Mr. E. H. Wilkie, 114, Maygrove Road, West Hampstead.

Dr. Adams.—It is a difficult matter to recommend any particular temperance lecture and set of slides to accompany such, as being the best. There are sets of these slides to be obtained without number. If you write to the Band of Hope Union, Old Bailey, London, they will send you a list.

E. Bachilleres (Pernambuco).—We enquired at the firm mentioned, re delay in sending your outfit, and learned that most of it had been ready for some time, and that the microscopic attachment, which was specially made, had caused considerable delay. This is, however, now completed and the apparatus as a whole is being tested and adjusted. It is, we are given to understand, to leave for Brazil within a few days.

E. Chaplin.—We quite agree with every word of your letter, but still, for obvious reasons, we cannot publish it. We note that you say we are in justice bound to publish it. If you like to engage space in our advertising columns for your remarks, all well and good, but we cannot under any circumstances insert it in the literary columns, although, as you say, "it is for the good of mankind at large." You must allow us to decide, and no power will over rule our decision. Try some other journal and you will be sure to be met in the same manner, unless the editor be a novice, and then he will probably have to pay for his inexperience.

Peter Modotti (Udine, Italy).—Obtain the list of photographic trade names recently issued by Dawbarn & Ward, Limited, 6, Farringdon Avenue, London, E.C. All the items you wish to know are contained therein.

R. Knight.—The syndicate to which you refer does not seem to be a promising affair, and we think you will have no trouble in finding better investments for your money. From letters in this issue, you will see that all the directors but one have resigned.

W. Hunter, jun.—5½ inches, 8 inches, 9¾ inches, and 12½ inches, respectively, will be the focus of each.

Warner Lawn.—There is a lot of nonsense talked about respecting the various qualities of lime, such being to a great extent encouraged by different lime makers, each of whom, of course, has "the best." If the matter is brought down to a fine point, we very much doubt if more than two in a score of lantern users know a good lime when they have it. This may perhaps seem a bold assertion, but you may take it as a fact.

Professor.—The requisite illumination in connection with stage skirt dancing with flowing robes is to let a plate of glass into the stage, so as to project coloured lights from below; others are projected from the side wings, and sometimes one is employed from above the dancer. The stage itself should be hung with black. A separate lantern can be used for projecting photographs upon the white dress of the dancer, and it is usual to mark a place on the stage for the dancer to stand during the time of pictorial projection. This ensures precision of projection, and also saves much focusing.